

REMARKS

In this Submission the above listing of the claims supersedes any previous listing. Favorable reexamination and reconsideration are respectfully requested in view of the preceding amendments and the following remarks.

Interview Summary

At a personal interview held between the Applicants' representative and Examiner Khiem D Nguyen, on July 10, 2008, the position was expressed that the claims were clear and that the cell region and the peripheral region were set forth in a manner which demanded that they be interpreted as being different and distinct from one another. It was then indicated that the Examiner's citation of structure on a peripheral portion of the "cell region" of Fang was inadequate to meet the claimed requirements. In other words, the structures which were being relied upon for rejection were not on the peripheral region *per se*, but on the edge of the cell region (as admitted by the Examiner on page 10 of the office action dated April 24, 2008). It was pointed out that if the Examiner's position were to be tenable then the claims should have been held to be indefinite in that the claims should indicate that the peripheral portion was in fact part of the cell region (assuming *arguendo* the Examiner's position to correct) and not a separate or distinct region. In that no issues were raised under § 112, then the claims, by calling for a cell region and a peripheral region, were clearly defining what are inherently two distinct regions.

The Examiner indicated an apparent appreciation of this. It was then offered to amend the claims to make it absolutely clear that the peripheral region was different and distinct from the cell region, if this would assist in advancing the prosecution. The Examiner indicated that he would take this up with his supervisor when a response was filed.

Claim Amendments/Status

In this response, independent claims 7 and 13 are amended in a manner which further clarifies that the cell and peripheral regions are separate from one another.

Response to comments in Advisory Action

In the Advisory Action the examiner has stated that the clarification of the claims to require “a distinct peripheral region” changed the scope of the claims. This is incorrect. The un-amended claims called for:

forming a tunnel oxide layer and a floating gate layer on a semiconductor substrate including a cell region and a peripheral region;

The claims did not recite a cell region and an edge portion of the cell region which is what the rejection is improperly based on. As noted above, there is no § 112 rejection and therefore the claims are acknowledged as being clear and distinct. The specification, **which includes the drawings**, shows the cell and peripheral regions as being different regions, therefore the “distinct” limitation merely clarifies what is different as being different. The fact that the word ‘distinct’ cannot be found *per se* is not an issue. To negate this issue, the specification is suitably amended in this response.

MPEP 608.01(o) Basis for Claim Terminology in Description [R-3] - 600 Parts, Form, and Content of Application states that:

The meaning of every term used in any of the claims should be apparent from the descriptive portion of the specification with clear disclosure as to its import; and in mechanical cases, it should be identified in the descriptive portion of the specification by reference to the drawing, designating the part or parts therein to which the term applies. A term used in the claims may be given a special meaning in the description. **>See MPEP § 2111.01 and § 2173.05(a).<

Usually the terminology of the original claims follows the nomenclature of the specification, but sometimes in amending the claims or in adding new claims, **new terms are introduced that**

do not appear in the specification. The use of a confusing variety of terms for the same thing should not be permitted.

New claims and amendments to the claims already in the application should be scrutinized not only for new matter but also for new terminology. **While an applicant is not limited to the nomenclature used in the application as filed,** he or she should make appropriate amendment of the specification whenever this nomenclature is departed from by amendment of the claims so as to have clear support or antecedent basis in the specification for the new terms appearing in the claims.

Just in case the examiner gives any consideration to this raising new matter, attention is called to the fact that new matter may be broadly defined as disclosure material not already explicitly, implicitly, inherently or intrinsically included in an application as of its effective filing date. Added matter in an application is not legally prohibited by statute as new matter when it merely makes explicit that which was originally implicit, inherent or intrinsic in the original disclosure. New matter may take the form of additions, deletions or modifications, subsequent to the initial filing of an application, to any part of the disclosure which includes the drawing, specification and claims. Matter may not be added to an application for the purpose of supplementing an otherwise inadequate disclosure of the invention in order to provide sufficient support for the claims. Any claim which requires new matter for its support is invalid. Added matter upon which no claim depends for support may have to be cancelled if objected to -by the Examiner as new matter but otherwise imposes no legal liability even if actually entered in the application. See generally, *In re Davies*, 475 F.2d 667, 177 U.S.P.Q. 381 (C.C.P.A. 1973), and *Rhone—Poulenc v. Dann*, 504 F.2d 983, 184 U.S.P.Q. 196. (4th Cir. 1974).

Claim Rejections Under 35 U.S.C. § 102

The rejection of claims 7-10 and 14 under 35 U.S.C. § 102(b) as being anticipated by Fang (U.S. Patent 6,667,511), of record, is respectfully traversed.

In the claimed arrangement, the semiconductor substrate includes the peripheral region on which the CAM cell is formed and the cell region on which the memory cell is formed. It is well-known to a person skilled in the art that a select gate transistor is formed on the cell region, together with the memory cell. That is, the select gate transistor is formed on the cell region, not on the peripheral region. Since a tunnel oxide layer and a floating gate layer formed on the peripheral region are removed, a dielectric layer is used as a gate oxide layer of the CAM cell formed on the peripheral region.

The peripheral region of the present invention corresponds to the peripheral regions 314, 315 shown in Fig. 9i of Fang and disclosed as being a peripheral region at column 10, lines 53-60.

The cell region of the claimed invention corresponds to the core region 305 shown in Fig. 9i of Fang. Since a select gate transistor 348 is formed on the core region 305 together with the memory cell 346, the select gate transistor 348 cannot correspond to the CAM cell of the present invention. Peripheral transistors 342, 350 of Fang are formed on the peripheral region 314, 315. Therefore, the peripheral transistors 342, 350 of Fang may correspond to CAM cell of the present invention.

A gate oxide layer of the peripheral transistor 342, 350 is formed of an oxide layer, not of the dielectric layer including an oxide layer and a nitride layer. That is, the gate oxide layer of the peripheral transistor 342, 350 of Fang does not include the nitride layer. In other words, Fang does not teach or suggest that the nitride layer is formed on the peripheral region in order to use the nitride layer as the gate oxide layer.

Accordingly, Applicant submits that the claims 7 and 13, as amended, are distinguished over the cited reference. Therefore, claims 7 and 13 and the claims which depend directly or indirectly therefrom, are also seen to stand in condition for allowance.

Claim Rejections Under 35 U.S.C. § 103

The rejection of claims 13 and 15 under 35 U.S.C. § 103(a) as being unpatentable over Fang (U.S. Patent 6,667,511) in view of Sheng et al (U.S. Patent 5,981,440), both of record, is respectfully traversed.

Fang does not teach or even suggest that the nitride layer is formed on the peripheral region in order to use the nitride layer as the gate oxide layer. Accordingly, Applicant believes that the claim 13 is patentable over the cited references, and the claims which depend from the base claim 13 are stand in condition for allowance.

Conclusion

It is respectfully submitted that the claims as they have been amended are allowable over the art which has been applied in this Office Action. Favorable reconsideration and allowance of this application are courteously solicited.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 07-1337 and please credit any excess fees to such deposit account.

Respectfully submitted,
LOWE HAUPTMAN HAM & BERNER, LLP

/Yoon S Ham/
Yoon S Ham
Registration No. 45,307

Customer Number: 22429
1700 Diagonal Road, Suite 300
Alexandria, Virginia 22314
(703) 684-1111
(703) 518-5499 Facsimile
Date: September 24, 2008